Material Safety Data Sheet

Issuing Date 17-Sep-2012  Revision Date 22-Mar-2011  Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name LR44

Recommended Use Alkaline battery.

Supplier Address
Hi-Watt Battery Industry Co., Ltd.
21 Tung Yuen Street, Yau Tong Bay,
Kowloon, Hong Kong, Hong Kong,
Hong Kong, 254678
HK
Phone: 852-2348 0111
Fax: 852-2772 7703
Contact: Frank Wang
Contact Phone: 852-2348 0111
Emergency Phone: 852-2348 0111

Company Emergency Phone Number 852-2348 0111

2. HAZARDS IDENTIFICATION

Emergency Overview

This product is an article. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals.

Appearance Silver  Physical State Solid.  Odor No information available

OSHA Regulatory Status
This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Potential Health Effects
Eye contact. Skin contact.

Principle Routes of Exposure

Acute Toxicity

Eyes
In case of rupture: Corrosive to the eyes and may cause severe damage including blindness.

Skin
In case of rupture: Causes burns.

Inhalation
Harmful if swallowed. In case of rupture: Ingestion causes burns of the upper digestive and respiratory tract.

Ingestion

Chronic Effects
Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risks of irreversible effects.

Aggravated Medical Conditions
Pre-existing eye disorders. Skin disorders. Respiratory disorders.

Environmental Hazard
See Section 12 for additional Ecological Information.
4. FIRST AID MEASURES

General Advice
This is a battery. In case of rupture, immediate medical attention is required.

Eye Contact
Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

Skin Contact
Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation
Call a physician or Poison Control Center immediately. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion
Immediate medical attention is required. Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down.

Notes to Physician
Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

Protection of First-aiders
Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE-FIGHTING MEASURES

Flammable Properties
Fire or intense heat may cause violent rupture of packages.

Flash Point
Not determined.

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazardous Combustion Products
Carbon oxides. Hazardous metal fumes and oxides.

Explosion Data

Sensitivity to Mechanical Impact
No.

Specific Hazards Arising from the Chemical
Sealed containers may rupture when heated. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Sensitivity to Static Discharge
No.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA
Health Hazard 1 Flammability 0 Stability 0 Physical and Chemical Hazards -
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Do not touch or walk through spilled material.

Environmental Precautions: Should not be released into the environment. Refer to protective measures listed in Sections 7 and 8.

Methods for Containment: Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up: In case of rupture: Use personal protective equipment. Take up mechanically and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Handling: In case of rupture: Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Avoid contact with skin, eyes and clothing.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures: Showers, Eyewash stations, Ventilation systems

Personal Protective Equipment

Eye/Face Protection: Tightly fitting safety goggles. Face-shield.

Skin and Body Protection: Protective gloves.

Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | Silver. | Odor | No information available. |
| pH | No information available. | Physical State | Solid |
| Flash Point | No information available. | Autoignition Temperature | No information available |
| Decomposition Temperature | No information available. | Boiling Point/Range | No information available |
| Melting Point/Range | No information available. | Explosion Limits | No information available |
| Flammability Limits in Air | No information available. | Solubility | No information available |
| Water Solubility | Immiscible in water | Vapor Pressure | No data available |
| Evaporation Rate | No information available. | Partition Coefficient: n-octanol/water | No data available |
| Vapor Density | No data available. | | |
10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions.

Incompatible Products
Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Conditions to Avoid
Heat.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Metal oxides.

Hazardous Polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Product Information

LD50 Oral VALUE 8305.328 mg/kg (rat) estimated
LD50 Dermal VALUE
LC50 Inhalaion (DUST) VALUE
LC50 Inhalaion (VAPOR) VALUE

Chronic Toxicity
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Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risks of irreversible effects.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

IARC: (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Target Organ Effects
Eyes. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated. Do not release to air, waters, or soil

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Dispose of in accordance with local regulations

Contaminated Packaging
Do not re-use empty containers.

California Hazardous Waste Codes 181

This product contains one or more substances that are listed with the State of California as a hazardous waste.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>MEX</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ICAO</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG/IMO</td>
<td>Not regulated</td>
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</table>
15. REGULATORY INFORMATION

International Inventories

TSCA  
Exempt

DSL  
Not determined

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
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</tbody>
</table>

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
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<tbody>
<tr>
<td>Supplier Trade Secret</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Mexico - Grade
Minimum risk, Grade 0

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier Trade Secret</td>
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<td>Mexico: TWA= 0.2 mg/m³</td>
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</table>

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
Non-controlled
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NPRI</th>
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<tr>
<td>Supplier Trade Secret</td>
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</tbody>
</table>

Legend
NPRI - National Pollutant Release Inventory

**16: OTHER INFORMATION**

Issuing Date          17-Sep-2012  
Revision Date         22-Mar-2011  
Revision Note         No information available

**General Disclaimer**
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet